CHAMELEON

PR-2012H

This product manual contains important information about the safe installation and use of this projector. Please read and follow these instructions carefully and keep this manual in a safe place for future reference.

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Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of this manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them.

Every apparatus is tested completely and packed properly by the manufacturer. Please make sure the packing and / or the apparatus is in good condition before your installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus. But any damage caused by improper use will not be assumed by the manufacturer and / or dealer.

ACCESSORIES

THESE ITEMS ARE PACKED TOGETHER WITH THE PROJECTOR

- Mounting Bracket (1 PCS)
- M8 knobs for bracket (2 PCS)
- Safety cord (1 PCS)
- Power-cord (1 PCS)
- XLR plug (1 PCS)
- XLR socket (1 PCS)
- This manual (1 PCS)

INTRODUCTION

Thank you for purchasing our product CHAMELEON, PR-2012H.

CHAMELEON adopts advanced procedure of design and manufacturing and uses international protocol DMX 512 and complies to CE norms. The outline of housing is elegant, lovable and portable, which features its special character compared with conventional luminaire. It is convenient to hang the unit and the angle of the body is easy to be adjusted, and the projector even can be carried by hand. The unit can be controlled by sound, auto programmes or a controller, and can be used as a stand-alone unit or linked with each other for multi-units or linked to a controller, so it is suitable for many different applications.

The lamp brightness can be adjusted and it will be switched off automatically after about 30 seconds of shutter, so it can effectively prolong the life of the lamp and the projector.

The unit features 8 colourful dichroic filters, and it may produce strobe/shutter and rainbow effect when the color wheel rotates fast.

The unit has auto thermal cut-off device for the unit operating in a safety condition.

SAFE USAGE OF THE PROJECTOR

The following points are important for safety as well as for the smooth installation and performance of the unit

When unpacking and before disposing of the carton check there is no transportation damage before using the projector. Keep the carton well for future possible transportation. Should there be any damage caused by transportation, consult your dealer and do not use the apparatus.

The projector is for Indoor use only, IP20. Use only in dry locations. Keep this device away from rain and moisture, excessive heat, humidity and dust. Do not allow contact with water or any other fluids, or metallic objects.

The projector is not designed or intended to be mounted directly on to inflammable surfaces.

The projector is only intended for installation, operation and maintenance by qualified personnel.

The projector must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces. Be sure that no ventilation slots are blocked.

Do not project the beam onto inflammable surfaces, minimum distance is 3m. 3m

Avoid direct exposure to the light from the lamp. The light is harmful to the eye.

Do not attempt to dismantle and/or modify the projector in any way.

Electrical connection must only be carried out by qualified personnel.

Before installation, ensure that the voltage and frequency of power supply match the power requirements of the projector. Please use the lamp with the specified type and rating.

It is essential that each projector is correctly earthed and that electrical installation conforms to all relevant standards.

Do not connect this device to any dimmer pack.

Make sure that the power-cord is never crimped or damaged by sharp edges. Never let the power-cord come into contact with other cables. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.

Never run the projector without a lamp.

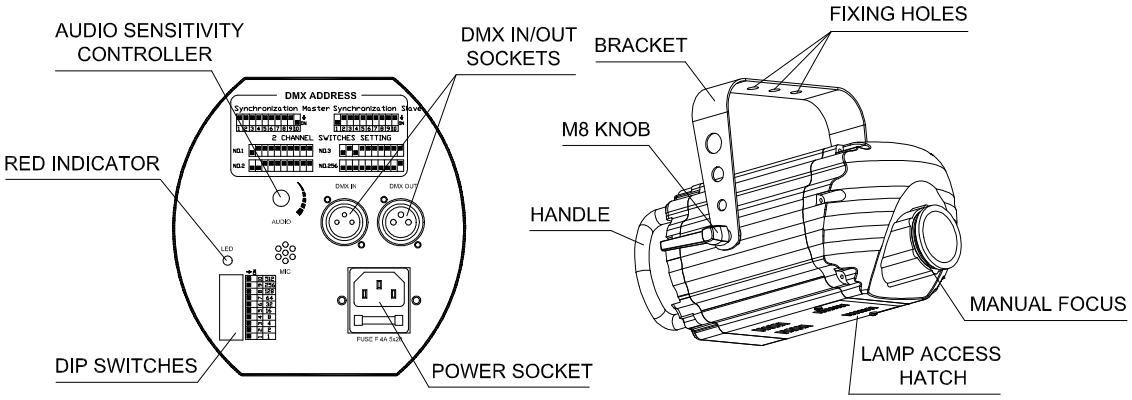
Switching the lamp on and off at short intervals will reduce the life of both the lamp and the projector. Occasional breaks will prolong the life of the lamp and the projector.

There are no user serviceable parts inside the projector, do not open the housing and never operate the projector with the covers removed.

Always disconnect from the mains, when the device is not in use or before cleaning it or before attempting any maintenance work.

If you have any questions, don’t hesitate to consult your dealer.

INSTALLING THE PROJECTOR



This unit has been designed to be hung. Mount the bracket provided on the body of the projector. There are 2 M8 knobs provided to tighten the body and the bracket. When you want to adjust the angle of the body of the projector, you only loosen the two M8 knobs carefully and then adjust the angle of the body. After finishing that, it is recommended that you don't forget to retighten the two M8 knobs. Always ensure that the projector is firmly positioned to avoid vibration and slipping and always ensure that the structure to which you are attaching the projector is secure and is able to support a weight of 6.9kg for each CHAMELEON.
For safety the unit should have a secondary fixing with a safety cable through the two handles on the back of the unit, and the safety cable should afford 10 times of the unit's weight.

FITTING THE LAMP

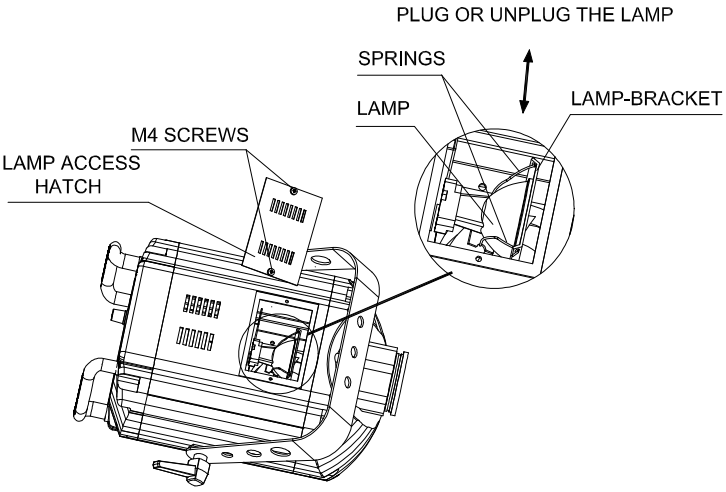
Remove the lamp access hatch by loosening the 2 M4 screws

Insert an ELC-7/X 24V/250W lamp in the lamp-holder.

Plug the lamp into the lamp-bracket until the lamp is fully seated, and let the two spring press the lamp stably.

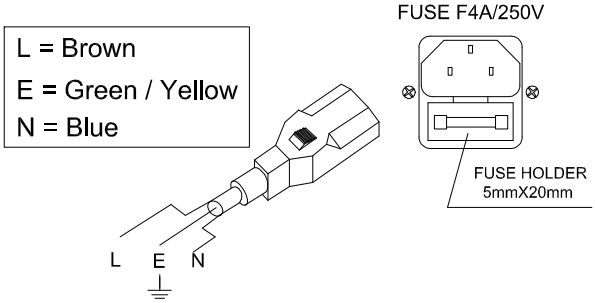
Install the lamp access hatch again.

Retighten the 2 M4 screws.



POWER SUPPLY - MAINS

Use the plug provided to connect the mains power to the projector paying attention to the voltage and frequency marked on the panel of the projector. It is recommended that each projector is supplied separately so that they may be individually switched on and off. It is recommended that **the green/yellow power-cord must be earthed correctly**.



OPERATION

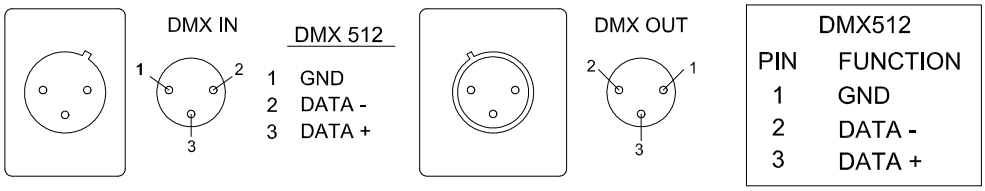
The projector can be controlled by sound, auto-programmes or a controller, and can be operated in Stand-Alone mode, Master/Slave synchro mode or Controller mode.
When the power is on, the projector will reset automatically for operation.

TO SET THE ADDRESS OF DIP SWITCHES

The DIP switch of the CHAMELEON has 10 switches with the number from 1 to 10, which may be set on the “ON” or “OFF” position. You should set the DIP switch correctly to operate the projector. (See “Stand-alone mode”, “Controller mode” and “Master/Slave synchro mode” for detail)

XLR CONNECTORS AND TERMINATOR

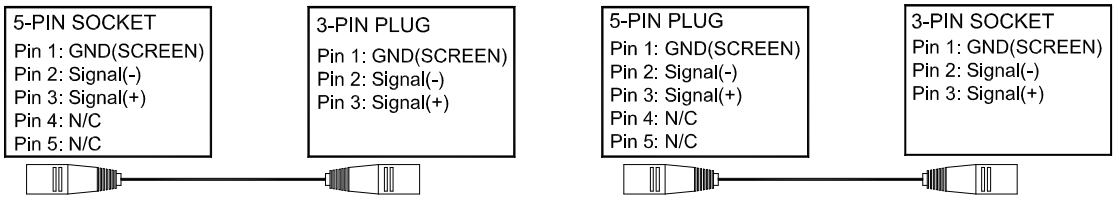
XLR CONNECTORS



Connection between controller and projector and between one projector and another must be made with 2 core screened cable, with each core having at least a 0.5mm diameter. Connection to and from the projector is via cannon 3 pin XLR plugs and sockets which are included with the projector. The XLR's are connected as shown in the figure above.
Note, care should be taken to ensure that none of the connections touch the body of the plug or each other. The body of the plug is not connected in any way. The CHAMELEON accepts digital control signals in standard DMX512 (1990) format.

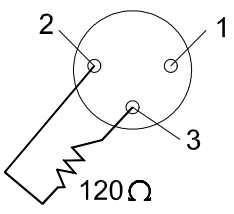
5-PIN AND 3-PIN CONVERSION

CHAMELEON uses 3-pin XLR plug / socket. If your controller uses 5-pin XLR plug / socket, you should convert 5-pin plug / socket into 3-pin socket / plug as shown below.



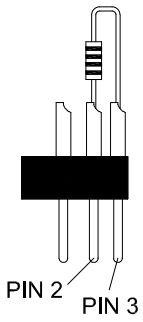
DMX TERMINATOR

In the Controller mode or Master/Slave mode, the DMX output has to be connected with a DMX terminator at the last fixture in the chain. This prevents electrical noise from disturbing and corrupting the DMX control signals.
The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated on the right.
The terminator is added a 120Ω resistor between pin-2 and pin-3 in a Canon plug, which can avoid the reflection during the DMX-512 signal transmission.



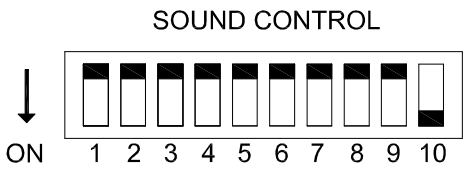
DMX TERMINATOR CONNECTION

Connect a 120Ω(OHM) resistor across pins 2 and 3 in an XLR plug and insert into the DMX OUT socket on the last unit in the chain.

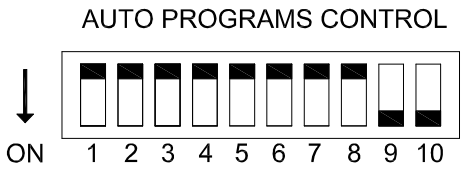


STAND-ALONE MODE

Without connecting a controller with the projector, the projector will run in Stand-Alone mode controlled by sound or auto programmes via setting the DIP switch as shown below.



Setting DIP switch #10 "ON"



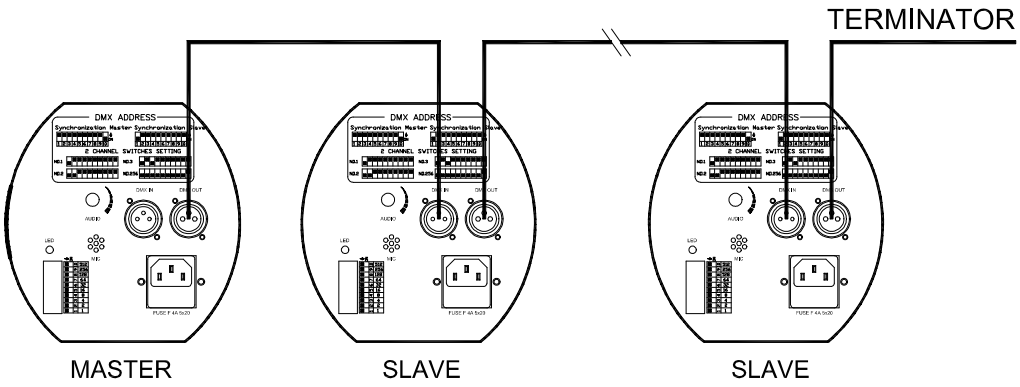
Setting DIP switch #9 and #10 "ON"

When sound activating, the projector will change the colours according to the rhythm of the music.

You may rotate the audio sensitivity controller for the best receiving sound signal.

When running the auto programmes, the red LED is constant on. When running the sound activation, the red LED will flashing according to the rhythm of the music.

MASTER / SLAVE SYNCHRO MODE



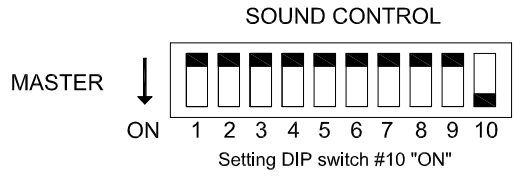
Without using the controller, many projectors can run synchronously by linking them with each other in the Master/Slave mode.

Select one projector as the master without connecting any cable to the projector's input, and set DIP switch as shown on the right.

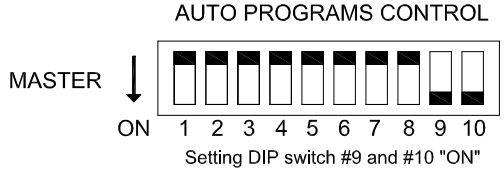
Regard the other projectors as the slaves, and set the DIP switch as shown on the right.

Connect the master's output to the first slave's input, and connect the first slave's output to the second slave's input. The rest may be deduced by analogy. Eventually connect the last slave's output to a DMX terminator as shown in the figure above.

In the Master/Slave mode, all slaves will change colors and gobos synchronously according to the master.



Setting DIP switch #10 "ON"



Setting DIP switch #9 and #10 "ON"

Setting all DIP switches #1 "ON"

CONTROLLER MODE – DMX OPERATION

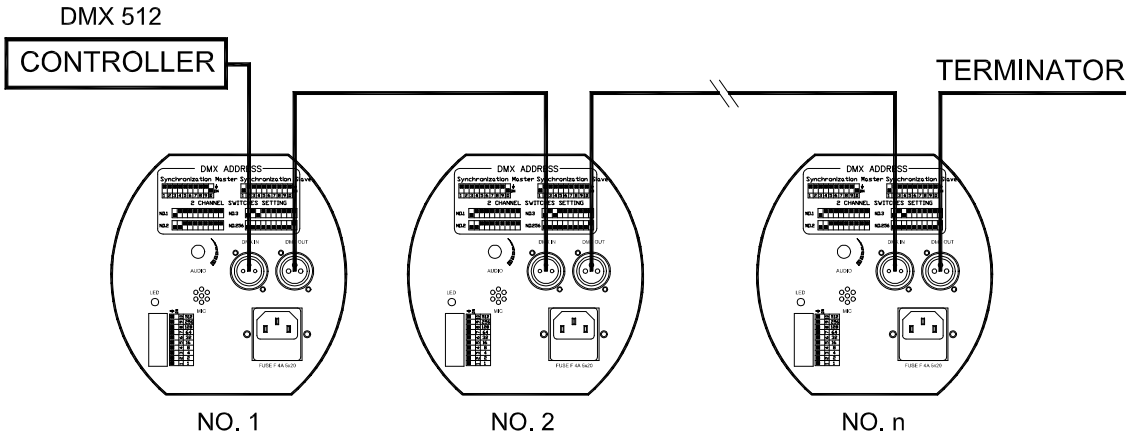
DMX512 CONTROL CHANNEL FUNCTIONS

CHAMELEON has 2 channels and uses DMX 512 control protocol. They are listed in the following table.

CHANNEL	DMX 512 VALUE	DESCRIPTION
1 COLOUR	0 - 16	Black-out
	17 - 33	Strobe
	34 - 50	White
	51 - 67	Cyan
	68 - 84	Yellow
	85 - 101	Green
	102 - 118	Purple
	119 - 135	Orange
	136 - 152	Red
	153 - 169	Pink
	170 - 179	Blue
	180 - 255	Colour wheel rotates in clockwise or anti-clockwise direction from slow to fast
2 DIMMER	0 - 255	Lamp brightness adjust from dark to bright

CONTROLLER AND PROJECTOR CONNECTION

Connect the controller's output to the first projector's input, and connect the first projector's output to the second projector's input. The rest may be deduced by analogy. Eventually connect the last fixture's output to a DMX terminator as shown in the figure below.



The red LED blinking means the projector is receiving DMX 512 signal normally.

TABLE FOR SETTING ADDRESS OF DIP SWITCHES

The following table lists the setting codes of the address of the DIP switches, and the luminaires are from No.1 to No. 256. Each DIP switch has 10 switches with the number of #1, #2, #3, #4, #5, #6, #7, #8, #9 and #10. (**For the CHAMELEON, set all #10 switches on the "OFF"**.)

In the table, "0" means the switch is on the "OFF", and "1" on the "ON".

For example, if you want to look up the address setting of the No 50 luminaire, you will find the NO 50 luminaire row (#1, #2, #3, #4, #5) with the codes of "1", "1", "0", "0" , "0" and column (#6, #7, #8, #9) with the codes of "1", "1", "0" , "0". So set the #1, #2, #6 and #7 switches on the "ON", and set the #3, #4, #5, #8, #9, and #10 switches on the "OFF".

Setting Table of DIP Switches					**#9**	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
0=OFF					**#7**	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
1=ON					**#6**	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
#1	**#2**	**#3**	**#4**	**#5**																	
0	0	0	0	0																	
1	0	0	0	0		1	17	33	49	65	81	97	113	129	145	161	177	193	209	225	241
0	1	0	0	0																	
1	1	0	0	0		2	18	34	50	66	82	98	114	130	146	162	178	194	210	226	242
0	0	1	0	0																	
1	0	1	0	0		3	19	35	51	67	83	99	115	131	147	163	179	195	211	227	243
0	1	1	0	0																	
1	1	1	0	0		4	20	36	52	68	84	100	116	132	148	164	180	196	212	228	244
0	0	0	1	0																	
1	0	0	1	0		5	21	37	53	69	85	101	117	133	149	165	181	197	213	229	245
0	1	0	1	0																	
1	1	0	1	0		6	22	38	54	70	86	102	118	134	150	166	182	198	214	230	246
0	0	1	1	0																	
1	0	1	1	0		7	23	39	55	71	87	103	119	135	151	167	183	199	215	231	247
0	1	1	1	0																	
1	1	1	1	0		8	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248
0	0	0	0	1																	
1	0	0	0	1		9	25	41	57	73	89	105	121	137	153	169	185	201	217	233	249
0	1	0	0	1																	
1	1	0	0	1		10	26	42	58	74	90	106	122	138	154	170	186	202	218	234	250
0	0	1	0	1																	
1	0	1	0	1		11	27	43	59	75	91	107	123	139	155	171	187	203	219	235	251
0	1	1	0	1																	
1	1	1	0	1		12	28	44	60	76	92	108	124	140	156	172	188	204	220	236	252
0	0	0	1	1																	
1	0	0	1	1		13	29	45	61	77	93	109	125	141	157	173	189	205	221	237	253
0	1	0	1	1																	
1	1	0	1	1		14	30	46	62	78	94	110	126	142	158	174	190	206	222	238	254
0	0	1	1	1																	
1	0	1	1	1		15	31	47	63	79	95	111	127	143	159	175	191	207	223	239	255
0	1	1	1	1																	
1	1	1	1	1		16	32	48	64	80	96	112	128	144	160	176	192	208	224	240	256

MAINTENANCE

If the projector's lens becomes damaged or broken it should be replaced. If the lamp becomes damaged or deformed in any way it must be replaced. If the light from the lamp appears dim this would normally indicate that it is reaching the end of its life and it should be changed at once, old lamps run to the extremity of their life can explode. If the projector does not function, check the fuses on the power socket of the projector, it should only be replaced by fuse of the same specified value 4A/250V (fast blow, 5mmx20mm). Should these be damaged call a qualified technician before replacement. The projector has thermal protection device that will switch off the projector in case of overheating, should either of these operate, check that the fans are not blocked, and if they are dirty clean them before switching on the projector again. Check that the fans are operational, if not call a qualified technician.

Any maintenance work should only be carried out by qualified technicians.

KEEPING THE PROJECTOR CLEAN

To ensure the reliability of the projector it should be kept clean. It is recommended that the fans should be cleaned every 15 days. The lens and dichroic colour filters should also be regularly cleaned to maintain an optimum light output. **Do NOT use any type of solvent on dichroic colour filters.**

Cleaning frequency depends on the environment in which the fixture operates: damp, smoke or particularly dirty surroundings can cause greater accumulation of dirt on the unit's optics. A soft cloth and typical glass cleaning products should be used in cleaning. It is recommended to clean the external optics at least once every 20 days and clean the internal optics at least once every 30 / 60 days.

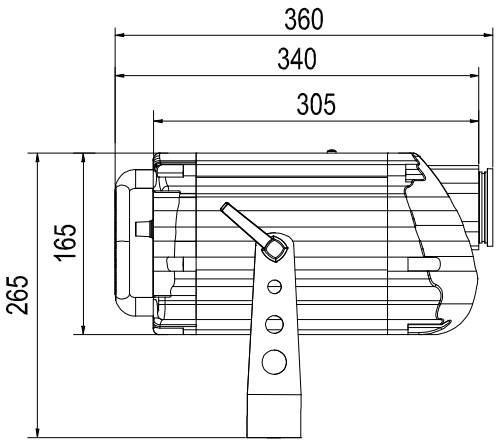
Do not use any organic solvent, e.g. alcohol, to clean the housing of the projector.

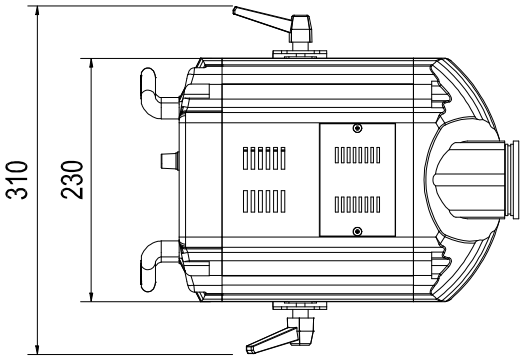
TROUBLESHOOTING

PROBLEM	RESOURCE
The projector does not start	Check the fuse on the socket is blown or not. Check if the lamp is good or not.
The projector switches on but does not answer to commands	Check setting the DIP switch is correct. Check the XLR cable is good.
The projector only functions intermittently	Check the fan is working and not dirty.
The beam appears dim	Check the lamp is not at the end of its life. Check the optics are clean.
Projection with halo	Carefully clean the lamp, the optical group lenses.
Defecting projection	Check the lenses are not broken. Remove dust or grease stored on lenses.

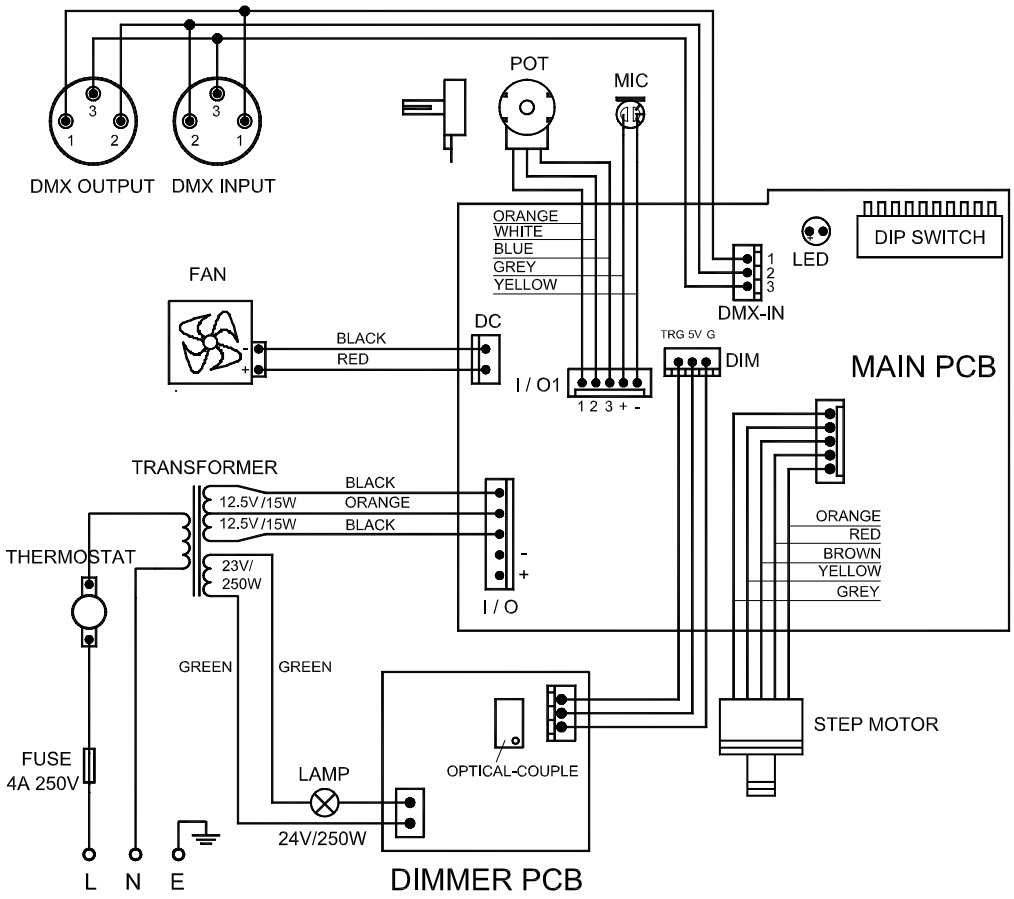
TECHNICAL DATA

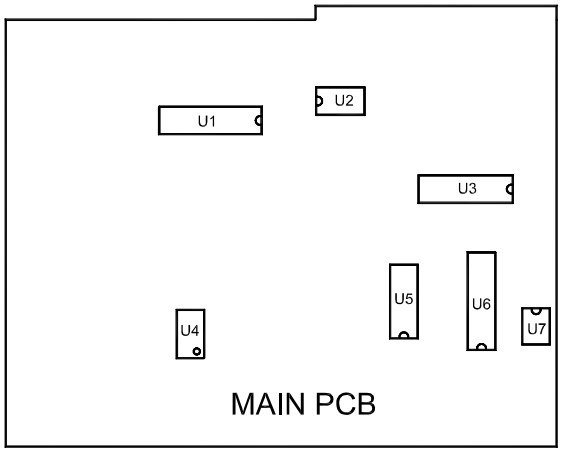
Power supply:	230V AC 50Hz
Optional:	240V, 220V, 200V, 120V, 100V AC 50/60Hz
Power consumption:	280W at 220V
Lamp:	ELC-7/X 24V/250W
Channels:	2 channels
Control signal:	Standard DMX 512
Control mode:	Sound activation / Auto programmes / Controller
Running mode:	Stand-Alone mode / Master/Slave synchro mode / Controller mode
Colours:	8 colours + white + black-out
Beam coverage:	11 °
Net weight:	6.9kg
Others:	Adjustable lamp brightness / Auto thermal cut-off / Rainbow effect / Strobe effect / Auto cut-off lamp after about 30 seconds of shutter





ELECTRICAL DIAGRAM





COMPONENT ORDER CODES

NAME	PART NO.	REMARK
TRANSFORMER	040040001	AC 230V/50Hz
THERMOSTAT	190010054	95℃/10A
FAN	030060008	DC12V
LAMP	100040060	ELC-7/X 24V/250W
STEP MOTOR	030040001	17HS0504L
U1	230040016	MICROPROCESSOR 2
U2	170170012	BUS CHIP FOR RECEIVING/TRANSMITTING
U3	170040009	TTL LOGICAL CHIP
U4	170050002	ARITHMETIC AMPLIFIER CHIP
U5	170170038	DRIVER CHIP
U6	230040026	MICROPROCESSOR 1
U7	230040019	SPECIAL CHIP

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Last Revision: 19:03:2003